

CRS Report for Congress

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Navy Ship Deployments: New Approaches — Background and Issues for Congress

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Summary

The Navy is implementing or experimenting with new kinds of naval formations, more flexible forward-deployment schedules, forward-homeporting additional Navy ships, and long-duration deployments with crew rotation (which the Navy calls Sea Swap). These changes, which form a key part of Navy transformation, raise several potential issues for Congress. This report will be updated as events warrant.

Background

As part of its transformation efforts,¹ the Navy is implementing or experimenting with new methods for deploying its ships overseas, including new kinds of naval formations, more flexible deployment schedules, homeporting additional Navy ships at forward locations, and long-duration deployments with crew rotation. Each of these changes is discussed below.

New Kinds Of Naval Formations. The Navy previously organized itself into aircraft carrier battle groups (CVBGs) and Amphibious Ready Groups (ARGs). An ARG typically included 3 amphibious ships that together were capable of embarking a Marine Expeditionary Unit (MEU), which is a force of about 2,200 Marines, their ground-combat equipment, and an aircraft detachment. ARGs traditionally operated overseas in the company of CVBGs. Navy officials believe this way of organizing the Navy no longer offers sufficient flexibility for responding to the potential need for deploying significant naval capability in several locations around the world at the same time. Navy officials also believe that with the increasing capabilities of Navy ships, naval formations other than the large CVBG/ARG combination can now be sufficient to perform certain missions.

¹ For more on naval transformation, see CRS Report RS20851, *Naval Transformation: Background and Issues for Congress*, by Ronald O'Rourke.

| Report Documentation Page | | | <i>Form Approved OMB No. 0704-0188</i> | | |
|---|------------------------------------|-------------------------------------|--|---------------------------------|---------------------------------|
| <p>Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</p> | | | | | |
| 1. REPORT DATE 14 JUL 2006 | 2. REPORT TYPE N/A | 3. DATES COVERED - | | | |
| 4. TITLE AND SUBTITLE Navy Ship Deployments: New Approaches - Background and Issues for Congress | | | 5a. CONTRACT NUMBER | | |
| | | | 5b. GRANT NUMBER | | |
| | | | 5c. PROGRAM ELEMENT NUMBER | | |
| 6. AUTHOR(S) | | | 5d. PROJECT NUMBER | | |
| | | | 5e. TASK NUMBER | | |
| | | | 5f. WORK UNIT NUMBER | | |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Congressional Research Service The Library of Congress 101 Independence Ave, SE Washington, DC 20540-7500 | | | 8. PERFORMING ORGANIZATION REPORT NUMBER | | |
| 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) | | | 10. SPONSOR/MONITOR'S ACRONYM(S) | | |
| | | | 11. SPONSOR/MONITOR'S REPORT NUMBER(S) | | |
| 12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited | | | | | |
| 13. SUPPLEMENTARY NOTES | | | | | |
| 14. ABSTRACT | | | | | |
| 15. SUBJECT TERMS | | | | | |
| 16. SECURITY CLASSIFICATION OF: | | | 17. LIMITATION OF ABSTRACT SAR | 18. NUMBER OF PAGES 6 | 19a. NAME OF RESPONSIBLE PERSON |
| a. REPORT unclassified | b. ABSTRACT unclassified | c. THIS PAGE unclassified | | | |

As a result, the Navy has implemented a new **Global Concept of Operations (CONOPS)** that reorganizes the Navy into a larger number of independently deployable, strike-capable formations. The most significant change under the plan is the conversion of ARGs into independently deployable formations called Expeditionary Strike Groups (ESGs). An ESG is an ARG that has been reinforced with 3 surface combatants and an attack submarine carrying Tomahawk cruise missiles, and perhaps a land-based P-3 Orion long-range maritime patrol aircraft. The Global CONOPS also creates independently deployable surface strike groups (SSGs), each consisting of a few surface combatants (most or all Tomahawk-armed), and independent operations by 4 Trident SSGN submarines that have been converted to carry Tomahawks and special operations forces. CVBGs under the Global CONOPS plan have been redesignated Carrier Strike Groups (CSGs). Implementing the Global CONOPS has changed the Navy from a fleet with 12 independently deployable CVBG/ARG formations into one with 20 major independently deployable strike groups (11 CSGs and 9 ESGs) and additional independently deployable capabilities in the form of SSGs and Trident SSGNs.

More Flexible Forward-Deployment Schedules. The Navy's traditional means of maintaining forward-deployed presence had been the standard six-month deployment. Although the six-month limit on deployment length and the predictability of the rotational deployment schedule were considered key to the Navy's ability to maintain its forward deployments while meeting its personnel recruiting and retention goals, Navy officials concluded that the deterrent value of forward-deployed naval forces might be enhanced by making naval forward deployments more flexible and less predictable. Navy officials have also concluded that orienting Navy readiness toward maintaining standard six-month deployments resulted in a fleet that offered insufficient flexibility for responding to the potential need for surging large numbers of naval forces in a short time to respond to major regional contingencies.

As a result, although six-month deployments will still take place, the Navy has put more flexibility into its deployment plans by deploying some CSGs and ESGs for less than or more than six months, as operational needs dictate. In addition, the Navy has implemented a new **Fleet Response Plan (FRP)** to increase the Navy's ability to surge multiple formations in response to emergencies. Under the FRP, CSGs and ESGs that have just returned from deployments will be kept, for a time, on alert for potential short-notice redeployment if needed, and CSGs and ESGs that are approaching their next scheduled deployment will be maintained in a higher readiness status so that they, too, could be deployed on short notice. Implementing the FRP with 11 CSGs, Navy officials say, permits the Navy to deploy up to 6 CSGs within 30 days, and an additional CSG within another 60 days after that. For this reason, the FRP is also referred to as "6+1." In June 2004, the General Accounting Office, or GAO (which in July 2004 was renamed the Government Accountability Office) reported that the FRP

does not shorten preexisting time frames for performing aircraft carrier maintenance. Furthermore, it does not alter existing major repair and maintenance requirements; methods of upgrading and modernizing weapons, communications, and engineering

systems; or methods of performing nuclear refueling. At this time, the potential impact of the plan on the Navy's budget is uncertain.²

In November 2005, GAO reported that

the Navy's management approach in implementing the Fleet Response Plan has not fully incorporated sound management practices needed to guide and assess implementation.... Sound management practices were not fully developed because senior leaders wanted to quickly implement the plan in response to changes in the security environment. However, without an overall management plan containing all of these elements, it may be difficult for the Navy to determine whether its efforts to improve the fleet's readiness are achieving the desired results, adequately measuring overall progress, or identifying what resources are needed to implement the Fleet Response Plan.

The Navy has not fully tested and evaluated the Fleet Response Plan or developed lessons learned to identify the effectiveness of its implementation and success over time.... instead of methodically conducting realistic tests to evaluate the Fleet Response Plan, the Navy has tried to demonstrate the viability of the plan by relying on loosely linked events that were not part of an overall test and evaluation strategy. This approach could impair the Navy's ability to validate the plan and evaluate its success over time. In addition, the Navy has not used its lessons learned system to share the results of its Fleet Response Plan events or as an analytical tool to evaluate the progress of the plan and improve implementation, which limits the Navy's ability to identify and correct weaknesses across the fleet.³

Forward-Homeporting Additional Ships. Homeporting Navy ships in overseas locations, called forward homeporting, can reduce transit times from home port to operating area and thus permit a Navy of a certain size to provide a larger number of ship days on station in overseas operating areas. The U.S. Navy's principal forward homeporting location is Japan, where the Navy since the early 1970s has forward homeported a CVBG and ARG. The Navy traditionally has also forward-homeported a small number of other ships, such as fleet command ships and repair ships, in forward locations such as Italy and the U.S. territory of Guam.

The Navy in recent years has forward-homeported four mine warfare ships at Bahrain in the Persian Gulf and three attack submarines at Guam. The Navy has studied the idea of homeporting an aircraft carrier and additional attack submarines at Hawaii or Guam. A March 2002 CBO report presented an option for homeporting as many as 11 attack submarines at Guam.⁴ The final report of the 2005 Quadrennial Defense Review (QDR) directs the Navy to provide at least six aircraft carriers and 60% of its submarines in the Pacific. Increasing the number of ships forward-homeported in the Pacific can improve

² Government Accountability Office, *Defense Logistics: GAO's Observations on Maintenance Aspects of the Navy's Fleet Response Plan*, GAO-04-724R, June 18, 2004, p. 3.

³ Government Accountability Office, *Military Readiness: Navy's Fleet Response Plan Would Benefit from a Comprehensive Management Approach and Rigorous Testing*, GAO-06-84, November 2005.

⁴ Congressional Budget Office, *Increasing the Mission Capability of the Attack Submarine Force*, Mar. 2002.

the Navy's ability to respond to contingencies in locations such as the Korean Peninsula or the Taiwan Strait.⁵

Long-Duration Deployments With Crew Rotation. As a potential fourth change, the Navy has experimented with the concept of long-duration deployments with crew rotation. This concept, which the Navy calls **Sea Swap**, is another way to reduce the amount of time that deployed ships spend transiting to and from operating areas. It involves deploying Navy ships overseas for periods such as 12, 18, or 24 months rather than 6 months, and rotating successive crews out to the ships for 6-month periods of duty. Sea Swap can reduce the number of ships the Navy needs to have in its inventory to maintain one such ship on station in an overseas operating area by 20% or more. Potential disadvantages of Sea Swap include extensive wear and tear on the deployed ship due to lengthy periods of time at sea, a reduced sense of crew "ownership" of a given ship (which might reduce a crew's incentive to keep the ship in good condition), and reduced opportunities for transit port calls (which have diplomatic value and are beneficial for recruiting and retention).

The Navy in recent years has conducted Sea Swap experiments with surface combatants and mine warfare ships. Navy officials have characterized the experiments successful in terms of ship days on station, total costs, ship maintenance and material condition, and crew re-enlistment rates during deployment. In July and August 2004, it was reported that a review of the Sea Swap experiment conducted by the Center for Naval Analyses found that although Sea Swap was successful in these terms, crew members participating in the experiment who were surveyed viewed the concept negatively and indicated they would be less likely to stay in the Navy if all deployments were conducted this way. The Navy made changes in later Sea Swap experiments to address issues that led to crew dissatisfaction, including lost liberty calls and increased training and work.

Navy officials at one time expressed interest in extending the Sea Swap concept to other types of ships. In 2005, Navy officials testified that applying Sea Swap somewhat widely throughout the fleet could help permit the fleet to be reduced from a range of 290 to 375 ships down to a range of 260 to 325 ships.⁶ More recently, however, Navy officials have expressed less enthusiasm for extending Sea Swap beyond surface combatants. A July 2006 press article reported that the Navy may limit Sea Swap to smaller surface combatants such as patrol craft, Littoral Combat Ships (LCSs), and frigates.⁷ A November 2004 GAO report on Sea Swap concept concluded the following:

To effectively institutionalize and implement change, best practices show that a comprehensive analytical framework provides useful information to decision makers. However, the Navy has not established such an analytical framework — consisting

⁵ For further discussion, see CRS Report RL33153, *China Naval Modernization: Implications for U.S. Navy Capabilities — Background and Issues for Congress*, by Ronald O'Rourke.

⁶ See, for example, Statement of Admiral Vernon Clark, USN, Chief of Naval Operations, Before the Senate Armed Services Committee, Feb. 10, 2005, pp. 17-19. For additional discussion, see CRS Report RL32665, *Potential Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress*, by Ronald O'Rourke.

⁷ Jack Dorsey, "Despite Success, Navy Unlikely To Continue Crew Swap Effort With Destroyers," *Norfolk Virginian-Pilot*, July 13, 2006.

of formal measurable goals, objectives, and metrics — that could be used to assess the feasibility of various rotational crewing options and determine their impact on operational requirements, ship condition, and crew morale. Further, the Navy has not systematically collected or developed accurate cost data to perform complete cost-effective analyses. Absent such information, the Navy may not know the full impact of rotating crews on surface ships, the extent to which the various options should be implemented, or whether it is getting maximum return on investment.

Because rotating crews on surface ships is evolving as an alternative, the Navy has not provided effective guidance when implementing the practice and has not systematically leveraged lessons learned.... While the Navy has well-established crew rotation policies and procedures for ballistic missile submarines that include appropriately documenting a ship's condition and turnover procedures for accountability, it has not provided comparable guidance to surface ships. As a result, the Navy unnecessarily risks repeating mistakes that could decrease warfighting effectiveness and crew morale.

Furthermore, the impact of ship maintenance on the implementation of rotational crewing has not been fully assessed.... It is a challenge to ensure the mission capability of ships that are deployed for longer periods because most maintenance and repair is usually completed between 6-month deployments. While rotating crews has enabled the Navy to keep ships deployed for up to 24 months, the service has not fully examined all issues related to the best maintenance strategies that could affect a ship's condition and crew's morale. Absent effective strategies, the Navy risks degrading long-term ship condition and discouraging crew support for rotational crewing.⁸

Issues For Congress

Potential issues for Congress include the following:

- How have the four changes discussed above affected the planned size and structure of the fleet?⁹
- For what kinds of ships should Navy use Sea Swap?
- How will FRP and the forward-homeporting of additional ships affect the distribution of Navy ship overhaul and repair work?
- How much additional funding will be needed under the FRP to maintain higher readiness levels for ships? What other Navy programs might need to be cut to finance any additional readiness-related expenditures?
- What are the Navy's intentions regarding the idea of homeporting an aircraft carrier or additional attack submarines at Hawaii or Guam? Should the Navy also examine options for forward-homeporting Navy ships in locations like the Mediterranean and Australia?

⁸ Government Accountability Office, Force Structure[:] Navy Needs to Fully Evaluate Options and Provide Standard Guidance for Implementing Surface Ship Rotational Crewing, GAO-05-10, November 2004.

⁹ For more on the Navy's proposed 313-ship fleet, see CRS Report RL32665, *Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress*, by Ronald O'Rourke.

Another potential strategy for increasing the percentage of time that Navy ships can be deployed is multiple crewing, which would involve maintaining an average of more than one crew for each Navy ship. Potential versions include having two crews for each ship (dual crewing), 3 crews for every 2 ships, 4 crews for every 3 ships, 5 crews for every 4 ships, or other combinations, such as 8 crews for every 5 ships. The most basic version of Sea Swap maintains an average of one crew for each ship, but Sea Swap could be combined with multiple crewing. For many years, the Navy's nuclear-powered ballistic missile submarines (SSBNs) have been operated successfully with dual crews. In 1997, a Navy study panel proposed multiple-crewing for other kinds of ships. The above-mentioned March 2002 CBO report presented the option of applying multiple crewing to the attack submarine fleet. Potential disadvantages of multiple crewing include the costs of recruiting, training, and retaining additional crews, the difficulty of achieving fully realistic training using land-based simulators (whose use would be more necessary because a given crew would not always have access to a ship for training), a reduced sense of crew "ownership" of a given ship, and increased wear and tear on the ship due to more intensive use of the ship at sea (which can reduce ship life).

Legislative Activity

FY2007 Defense Authorization Bill (H.R. 5122/S. 2766).

House. Section 332 of H.R. 5122 would require a Navy report on several aspects of the FRP, followed by a GAO review of that report, and would prohibit expansion of the FRP beyond the Navy's CSGs until October 1, 2007. Section 333 would require a Navy report on several aspects of the Navy's surface ship rotational crew programs (Sea Swap), and would prohibit any additional surface ship rotational crew experiments or program until October 1, 2009. The House Armed Services Committee, in its report (H.Rept. 109-452 of May 5, 2006) on H.R. 5122, stated:

The committee has concerns regarding expansion of the Fleet Response Plan to other ships beyond those in a carrier strike group. The committee notes the Navy has neither fully tested and evaluated the Fleet Response Plan nor formally implemented the required operational, training and personnel directives to manage this program....

The committee is concerned about the expansion of the surface ship rotation crew program formally known as Sea Swap to other surface ships. Potential disadvantages of Sea Swap include extensive wear and tear on the deployed ship due to a lengthy period of time at sea, reduced sense of crew ownership of a given ship, reduced opportunities for transit port calls and a negative impact on crew morale and retention. (Pages 301-302)

Senate. The Senate Armed Services Committee, in its report (S.Rept. 109-254 of May 9, 2006) on S. 2766, stated:

In certain cases, the success of the Fleet Response Plan relies on the timeliness of the decision to surge-deploy the naval forces, and with smaller force levels and reduced forward presence, the Fleet Response Plan approach may increase risk if we do not have the level of insight into the threat necessary for timely action. (Page 380)